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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,136	04/19/2004	Kurt Francis	LO-0042	2302
35723	7590	04/21/2006	EXAMINER	
LITTLE OPTICS, INC 9020 JUNCTION DRIVE ANNAPOLIS JUNCTION, MD 20701			WONG, ERIC K	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,136

Applicant(s)

FRANCIS ET AL.

Examiner

Eric Wong

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/2/06 have been fully considered but they are not persuasive. Applicant argues with respect to claims 1 and 13 that the prior art of Cole fails to disclose a waveguide structure going around an "optical processing area". Examiner respectfully disagrees. Applicant's specification does not go into detail as to what the "optical processing area" comprises. As currently interpreted, it appears that any waveguiding structure would define an "optical processing area". Furthermore, Applicant argues that Cole provides no loop or waveguide structure going "around" said optical processing area. Examiner respectfully disagrees. As broadly interpreted, there is not limitation as to the area said structure goes around. Whether the structure goes around in a loop with a small radius or large, it appears the limitations as currently claimed have been met by Cole. Finally, Cole discloses in Column 8, lines 20-25, any different loop configurations can be used as is known in the art (See US 6,122,423 for such a loop type structure as is known in the art).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 5-14 and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent Number 6,654,523 to Cole.

Art Unit: 2883

Cole discloses in figures 4-6 and column 2, line 57 to column 3, line 10, a method of connecting an integrated optical waveguide circuit component with an optical fiber array comprising the steps of:

- Providing an integrated optical waveguide circuit component having an optical processing area, N input and output waveguide ports including a subset of at least one waveguide structure (250), wherein the at least one waveguide structure goes around said processing area;
- Providing an optical fiber array having an array of M optical fibers (264, 266), said fibers each having a coupling end for optical coupling to at least a portion of the input waveguides and output waveguides of said integrated optical waveguide circuit component, wherein at least a portion of said optical fibers terminating with an individual optical fiber terminal end;
- Positioning said array adjacent to said optical waveguide circuit, so that a plurality of photons emitted from the coupling end of at least one of the optical fibers are coupled into the at least one waveguide structure of said circuit component and coupled back into the coupling end of at least one of the optical fibers of the optical fiber array;
- Means for adjusting the relative position of said array (column 7, lines 5-7);
- Means for securing said position of array.

As to claim 2, the array is held in an array holder (104).

As to claim 5, the array is secure to maximize sensed values.

As to claim 6, M and N are at least two.

Art Unit: 2883

As to claim 7, circuit component is a planar substrate.

As to claims 8-12 an alignment system with a control unit is disclosed.

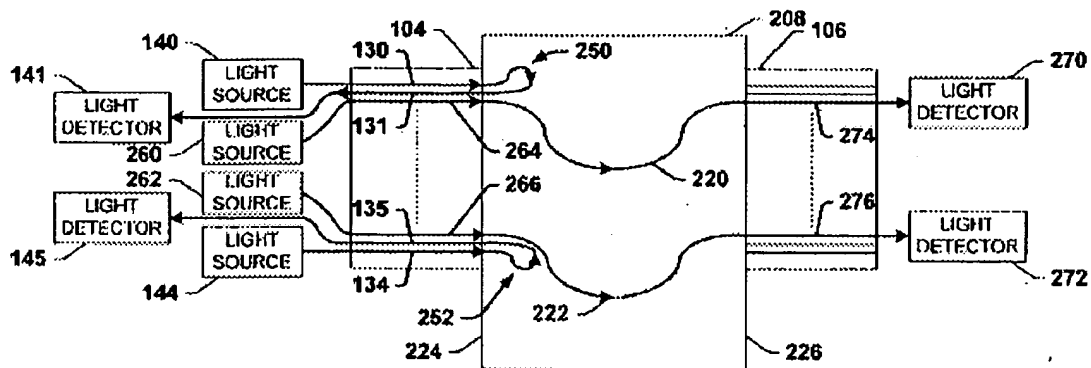


FIG. 4

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole as applied to claim 1 above.

Cole discloses a method of aligning a fiber array with a planar waveguide circuit with optical fiber terminal ends, but fails to explicitly disclose the use of a fiber ribbon.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a ribbon as claimed, since the Examiner takes Official Notice of the equivalence of optical fiber ribbons and optical fiber arrays for their use in the optical communication art and the selection of these known equivalents to transmit optical signals would

Art Unit: 2883

be within the level of ordinary skill in the art. It is respectfully noted that Applicant does not appear to disclose any criticality in the specific use of an optical fiber ribbon in Applicant's specification. It is further noted that Cole does not specifically limit the arrangement of the optical fibers disclosed. By merely using a fiber ribbon instead of individual fibers is general optical engineering practice to save space, and to protect fibers from damage. Examiner's contention of this obvious choice in design can be overcome if Applicant establishes unexpected results by arranging the optical fibers in a ribbon structure as claimed.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wong whose telephone number is 571-272-2363. The examiner can normally be reached on Monday through Friday, 830AM - 430PM.

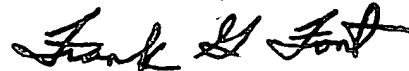
Art Unit: 2883

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EW



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